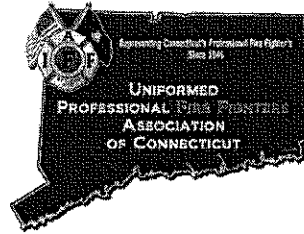


UNIFORMED PROFESSIONAL FIRE FIGHTERS ASSOCIATION OF CONNECTICUT  
AFFILIATED WITH INTERNATIONAL ASSOCIATION OF FIRE FIGHTERS  
30 Sherman Street, West Hartford, CT 06110  
Office: (860) 953-3200 Office Fax: (860) 953-3334

PRINCIPAL OFFICERS

Peter S. Carozza, Jr., *President*  
Richard Hart, *Director*  
Legislative/Political Affairs



Louis P. DeMici, *Secretary*  
Robert P. Anthony, *Treasurer*

Good afternoon, Honorable Chairmen Rep Dargan, Sen. Larsen, Honorable members of the Public Safety and Security Committee, my name is Richard Hart. I represent the Uniformed Professional Firefighters Association of Connecticut which represents 43 Local affiliates of the International Association of Firefighters. Membership in the UPFFA is comprised of approximately 4,000 Union firefighters in Connecticut.

I am speaking in **support** of HB 5107, An Act Concerning Residential Solar Photovoltaic Installations. A typical solar panel measures 2'x5' and if the solar panel is rated at 175 watts/panel and the maximum power voltage,  $V_{mp}$ , is given as 23.6 volts, then calculate the current as 175 watts divided by 23.6 volts, which is equal to 7.42 amps; approximately .1-.2 amps can kill a human. The typical residential solar array consists of approximately 20-24 panels for a maximum output of 148.4 amps, more than enough to kill a firefighter if not disconnected.

The National Fire Protection Association (NFPA), which issues the Standard, NFPA 70 the National Electrical Code (NEC), and Connecticut adopted the 2011 edition of the NEC. The 2014 edition of NFPA 70 requires that any new installation of a residential solar photovoltaic system has a "rapid shutdown" system to protect firefighters. According to the January/February NFPA Journal, this shut off will reduce output in 10 seconds to a range of 30 volt-amperes to no greater than 240 volt-amperes, thus eliminating the possibility of electrical shock or burns to firefighters operating on a roof with a solar array.

Given the recent proliferation of photovoltaic panel installations, the passage of HB 5107 will protect firefighters and homeowners from the possibility of electrocution. Thank you for your time.

Richard Hart

*Richard Hart*

DIRECTOR  
Legislative/Political Affairs

Walter M. O'Connor, *President Emeritus*  
Santo J. Alleano, Jr., *Vice President Emeritus*

Raymond D. Shea, *President Emeritus*  
Patrick J. Shevlin, *Treasurer Emeritus*